Ajo MUNICIPAL AIRPORT

Chapter Four

DEVELOPMENT ALTERNATIVES

Ajo MUNICIPAL AIRPORT

DEVELOPMENT ALTERNATIVES

In the previous chapter, airside and landside needs that would satisfy projected demand over the planning period were identified. The next step in the master planning process is to evaluate the various ways these facilities can be provided. In this chapter, these facility needs will be applied to a series of airport development alternatives. There are a number of possible alternatives, so some intuitive judgement must be applied to identify those alternatives that have the greatest potential for implementation. The alternative analysis is a critical step in the planning process because it provides the underlying rationale for the final master plan recommendations.

Three basic conceptual alternatives can be considered. The first involves the transfer of projected aviation demand to other regional airports, or possibly to a new airport site. The second is a "no development" or "do nothing" alternative where the existing airport is left as it is. The third alternative involves a development program within the physical and environmental constraints that currently exist. The alternative concepts presented in this chapter are provided for the purpose of reviewing the relative merits of each, as well as the impacts of the implementation of each alternative on the existing airport facilities, environs, and surrounding community.

TRANSFER OF AVIATION SERVICES

The alternative of shifting aviation to another existing airport was found undesirable due to the lack of other adequate aviation facilities located near the Town of Ajo. As noted in Chapter One, there are four public-use airports of significant size located within 100 nautical miles of Ajo Municipal Airport. The closest of these being Gila Bend Municipal Airport, is located 35 nautical miles to the north in Maricopa County. Given their considerable ground distance from Ajo, these airports are not in a good position to serve the Ajo area. In this regard, Ajo Municipal Airport is in the best position to meet the long-range general aviation needs of Ajo and far Western Pima County.

CONSTRUCTION OF A NEW AIRPORT

The alternative of developing an entirely new airport to meet the aviation needs of the Town of Ajo and the region was also considered. However, like the transfer of services option, this too was found to be a less than favorable alternative, due mainly to economic and environmental considerations. Land acquisition, site preparation and the construction of a new airport facility can prove a very arduous and costly action. In a situation where public funds are limited, the replacement of a functional airport facility would represent an unjustifiable loss of a significant public investment. From social, political, and environmental perspectives, the commitment of a new large land area must be considered. In the last few years, public sentiment toward new airport construction has been rather negative, primarily because new airports normally require the acquisition of several large parcels of privately or publicly-owned land. Additionally, the development of a new airport similar to Ajo Municipal Airport would likely take several years to become a reality. Furthermore, the potential exists for significant environmental impacts associated with disturbing a large land area when developing a new airport site. Consequently, the construction of a new airport, when the existing Ajo Municipal Airport can be improved for considerably less cost, cannot be considered a prudent or feasible alternative.

DO-NOTHING ALTERNATIVE

When analyzing and comparing the costs and benefits of varied development alternatives, it is important to consider the consequence of no future development at Ajo Municipal Airport. The "do-nothing" alternative essentially considers keeping the Airport in its present condition and not providing for any type of improvement to the existing facilities. However, aviation forecasts and facility requirement analysis for the Airport indicate both a current and future need for the development of a longer and wider main runway, a crosswind runway, additional taxiways, improved navigational aids, runway/taxiway lighting, minimal general aviation terminal facilities, aircraft storage facilities and improved airport security. Without these facilities, the development of the Airport's role as a viable and productive contributor to the local economy will be greatly hampered.

AIRPORT DEVELOPMENT ALTERNATIVES

Chapter Three identified both the airside and landside facilities necessary to satisfy forecast demands through the planning period. The overall objective is to produce a balanced airside and landside complex to serve forecast aviation demands.

The development alternatives for Ajo Municipal Airport can be categorized into functional areas: the airside (runways and taxiways) and landside (terminal facilities, aircraft storage hangars, and aircraft parking apron). Within each of these functional areas, specific facilities are required or desired. Although each of these areas is treated separately, each relates to and also effects the development potential of one another. Therefore, these areas must be examined both

individually and collectively, then integrated into a final plan that is functional, efficient, cost effective and minimizes environmental impacts. The result of this process is a fundamental airport concept that produces a realistic development plan.

AIRFIELD SAFETY CONSIDERATIONS

Airfield facilities are, by nature, the focal point of the airport complex. Due to their primary role and the fact that they physically dominate airport land use, airfield facility needs are often the most critical factor in the determination of rational airport development alternatives. Particularly, the runway system requires the greatest commitment of land area and often imparts the biggest influence on the identification and development of other airport alternatives. Additionally, because of the nature of aircraft operations, a number of FAA design requirements must be considered when examining airfield improvements. These requirements can often have a substantial impact on the feasibility of various alternatives designed to meet airfield needs.

FAA design criteria defines the physical attributes of runways, taxiways, as well as the separation of facilities, and the limits of imaginary surfaces, which protect aircraft from objects that could present a hazard to navigation. As previously discussed in Chapter Three, FAA design requirements are most often based upon the approach speed and wingspan of the most demanding aircraft that will operate at the airport. However, these requirements may also be affected by the airport's approach visibility minimums. An examination of these specifications for the design aircraft results in an FAA defined ARC that governs the elements of design standards for each specific runway. Again, based upon the data presented in Chapter Three, the ARC's governing the future runway development at Ajo Municipal Airport were determined to be ARC B-II for Runway 12-30, and ARC B-I for any future crosswind runway (probably Runway 5-23). The airfield design standards for ARC's B-I and B-II are presented in **Table 4A**.

An examination of the existing airside/landside separation distances, reveals that the Airport meets the majority of both current ARC B-I and future ARC B-II design requirements. The exceptions to this would be the future RPZ for an extended Runway 12, as shown on both **Exhibits 4A** and **4B**, which would partially extend off Airport property. The FAA recommends that positive control of these areas be obtained by the Airport either by avigation easement or property acquisition. It is further suggested that all shrubs and trees be removed from within the boundaries of both the runway object free area (OFA) and runway obstacle free zone (OFZ).

Additionally, with the recommended reactivation of Runway 5-23, the establishment of a protected runway visibility zone (RVZ) is necessary. The RVZ is required for airports without an air traffic control tower and intersecting runways in order to provide adequate line-of-sight for aircraft between the intersecting runways. The purpose of the RVZ is to reduce the possibility of collisions between aircraft using the intersecting runways. The RVZ clearing standards require this zone to be free of objects that could prevent an adequate view of the intersecting runway. The RVZ is an area formed by

Table 4A
Airfield Design Standards by ARC

Airport Reference Code **Approach Visibility Minimums**	B-I[1] One Mile	B-II One Mile
Runway		
Width	60'	75'
Runway Safety Area (RSA)		
Width	120'	150'
Length Beyond Runway End	240'	300'
Object Free Area (OFA)		
Width	250'	500'
Length Beyond Runway End	240'	300'
Runway Centerline to:		
Parallel Taxiway Centerline	150'	240'
Edge of Aircraft Parking Apron	125'	250'
Runway Protection Zones (RPZ)		
Inner Width	250'	500'
Outer Width	450'	700'
Length	1,000'	1,000'
Obstacle Clearance	20:1	20:1
Building Restriction Line (BRL)[2]		
Distance from Runway Centerline	370'	495'
Taxiways		
Width	25'	35'
Safety Area Width	49'	79'
Object Free Area Width	89'	131'
Taxiway Centerline to:		
Parallel taxiway/Taxilane	69'	105'
Fixed or Moveable Object	44.5'	65.5'
Taxilanes		
Taxilane Centerline to:		
Parallel Taxilane Centerline	64'	97'
Fixed or Moveable Object	39.5'	57.5'
Taxilane Object Free Area	79'	115

Source: FAA Airport Design Software Version 4.2D, F.A.R. Part 77, TERPS
[1]Small Aircraft less than 12,500 pounds.
[2]35-Foot Building Height

imaginary lines connecting the crosswind runways visibility points. These visibility points are generally the midpoint between each runway end and the intersection of the two runway centerlines. A diamond-shaped area is formed by connecting the points. *FAA Advisory Circular 150/5300-13, Airport Design* states "Terrain needs to be graded and permanent objects need to be designed or sighted so that there is an unobstructed line of sight from any point five feet above an intersecting centerline within the runway visibility zone." Other surfaces that affect the safe operation of aircraft at an airport include the primary surface, the transitional surfaces, and the building restriction line (BRL). The primary surface and transitional surfaces are both components of Federal Aviation Regulations (FAR) Part 77, and are intended to protect aircraft operating areas from hazards that could affect the safe and efficient operation of aircraft arriving and departing the airport. The primary surface is a rectangular surface centered on the runway centerline and extends 200 feet beyond each runway end. It is recommended that all vegetation that may present an obstruction be cleared from the primary surface. The width of the primary surface is the same as the inner width of the runway protection zone. The transitional surface begins at the outside edge of the primary surface and rises at a slope of seven to one. There is no restriction on objects within the transitional area, as long as they do not penetrate the sloping surface. Currently, no objects other than native desert vegetation are known to penetrate either the primary or transitional surfaces at Ajo Municipal Airport.

The building restriction line (BRL) is an imaginary line denoting a 35-foot clearance of the transitional surface. The distance for this line on either side of the runway from the runway centerline is 370 feet for ARC B-I and 495 feet for ARC B-II. Presently, there are no existing structures within these ultimate BRL's at Ajo Municipal Airport. Future landside facilities will be designed and located accordingly.

AIRSIDE ALTERNATIVES

This section presents three separate airside development alternatives. Each of these alternatives provides for an ultimate runway length of 5,500 feet for Runway 12-30. Arriving at this 1,700 foot extension differs for each alternative and could, if necessary, be accomplished in stages. However, a minimum length of 4,800 feet is recommended for the short-term planning period. Additionally, each alternative illustrates the proposed crosswind Runway 5-23.

The first airside development alternative, shown on **Exhibit 4A, Airside Alternative 1**, achieves the ultimate 5,500 foot runway length of Runway 12-30 by extending the Runway 12 end 1,200 feet to the northwest and extending the Runway 30 end 500 feet to the southeast. Designing this runway to ARC B-II standards results in an ultimate 75-foot width with a pavement strength of 30,000 pounds dual-wheel loading. To service this extended runway, a full-length parallel taxiway is proposed to be constructed. Located at the ARC B-II specified distance of 240 feet from runway centerline to taxiway centerline, this taxiway would connect the Runway 12 end to the Runway 30 end by means of an apron-edge taxiway transecting the existing apron and would be denoted by pavement markings. Additionally, this parallel

taxiway and any related exit taxiway stubs, including the existing dirt taxiway near the Runway 30 end, would be paved to a width of 35 feet and a strength rating of 30,000 DWL.

Should the suggested one-year wind study or other factors support the reactivation of crosswind Runway 5-23, it is proposed that this runway be designed to ARC B-I standards (small aircraft exclusively). The recommended paved length of this runway is 3,800 feet with a width of 60 feet and a pavement strength rating of 12,500 pounds. As with Runway 12-30, a full-length parallel taxiway is recommended to service this new runway. Adhering to ARC B-I specifications, this taxiway and related exit taxiways would be paved to a width of 30 feet and a strength rating of 12,500 single-wheel loading. Again, similar to Runway 12-30's parallel taxiway, this parallel taxiway would connect the Runway 5 end (northeast) to the Runway 23 end (southwest) by way of an apron-edge taxiway that would transect the existing apron. As previously noted, this proposed crosswind runway and related parallel taxiway is common to all three airside alternatives presented in this chapter.

By nature of its remote location, surrounding land uses, large property boundary, and typical operating aircraft, Ajo Municipal Airport is rather unique. As such, **Airside Alternative 1** offers no distinct advantages over the other two airside alternatives presented in this chapter. The fact that a 1,200 foot extension of Runway 12 to the northwest causes the RPZ to extend partially off airport property and would require an avigation easement or property acquisition (±1 acre) could be viewed as a disadvantage.

Exhibit 4B, Airside Alternative 2, proposes the entire 1,700 foot runway extension be constructed on the Runway 12 end. As with the first alternative, this alternative proposes a full-length parallel taxiway built to ARC B-II specifications which were detailed in the previous alternative description. Again, like the previous alternative, Alternative 2 recommends the reactivation of Runway 5-23 and the construction of its related parallel taxiway. This alternative is also deemed somewhat less than desirable as it would require either an avigation easement or property acquisition (±5 acres) to obtain positive control of the Runway 12 RPZ. Additionally, the ARC B-II requirements for runway safety area (RSA) clearing and grading of 300 feet beyond the runway end would appear, upon preliminary examination, to impact a desert wash located approximately 1,800 feet northwest of the existing Runway 12 end. Thus, extension of both the runway and taxiway and provision of the required safety area may require a Section 404 (Clean Water Act) permit prior to construction.

The final airside alternative reflected on **Exhibit 4C, Airside Alternative 3**, accomplishes the total 1,700 foot runway extension with a 700-foot extension to the Runway 12 end and a 1,000-foot extension to the Runway 30 end. Like the two previous alternatives it shows the proposed full-length parallel taxiway as well as the reactivation of Runway 5-23 and its related parallel taxiway. The main advantage of this alternative over Alternatives 1 and 2 is that the RPZ's are situated completely on existing airport property thus requiring no avigation easements, future property acquisition or special permitting. Additionally, this alternative provides a more balanced runway configuration. The lone disadvantage would be that the 4-foot diversion levee presently located 1340 feet from the existing Runway 30 threshold could present a 2-foot penetration

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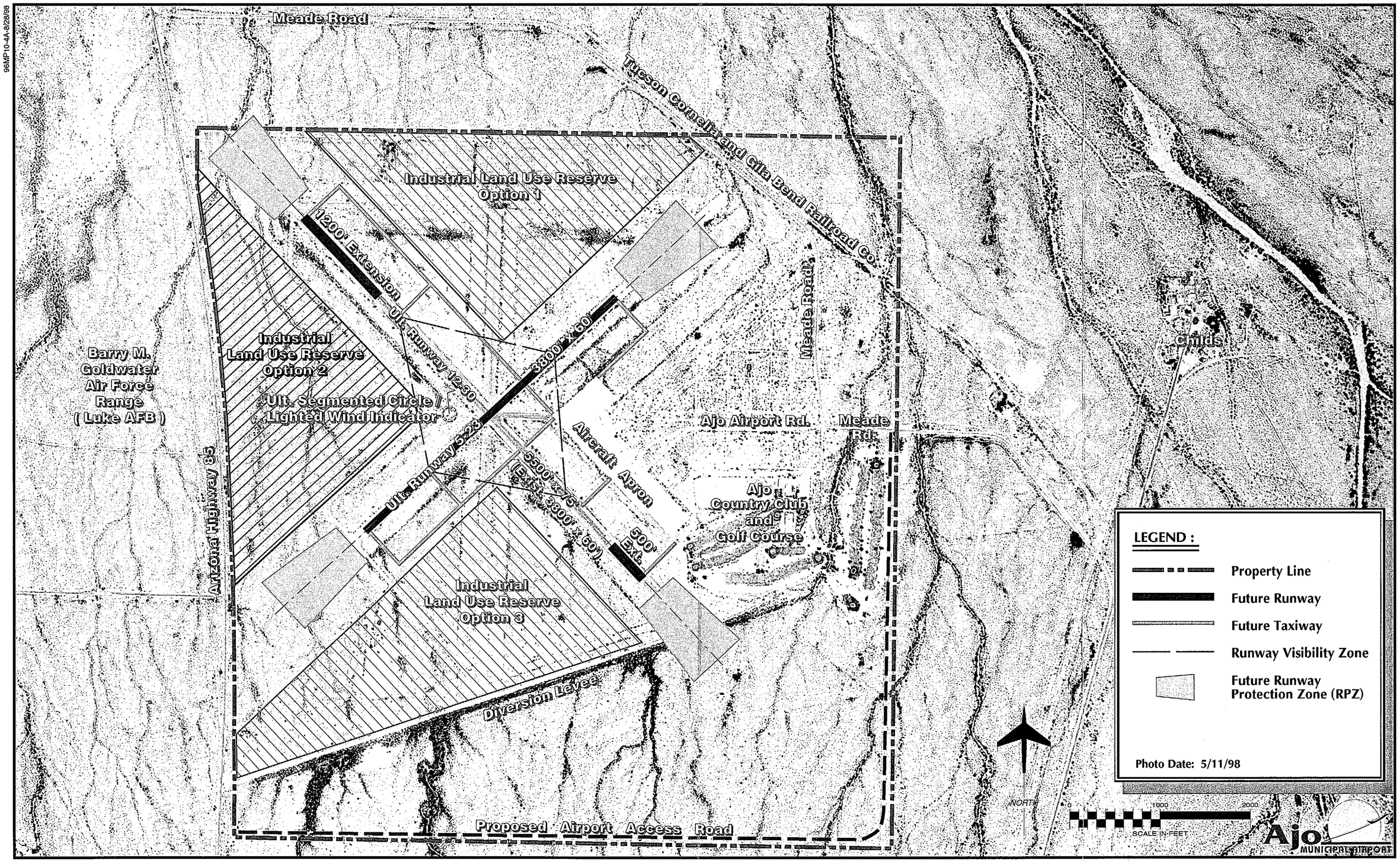

Exhibit 4A
AIRSIDE ALTERNATIVE 1

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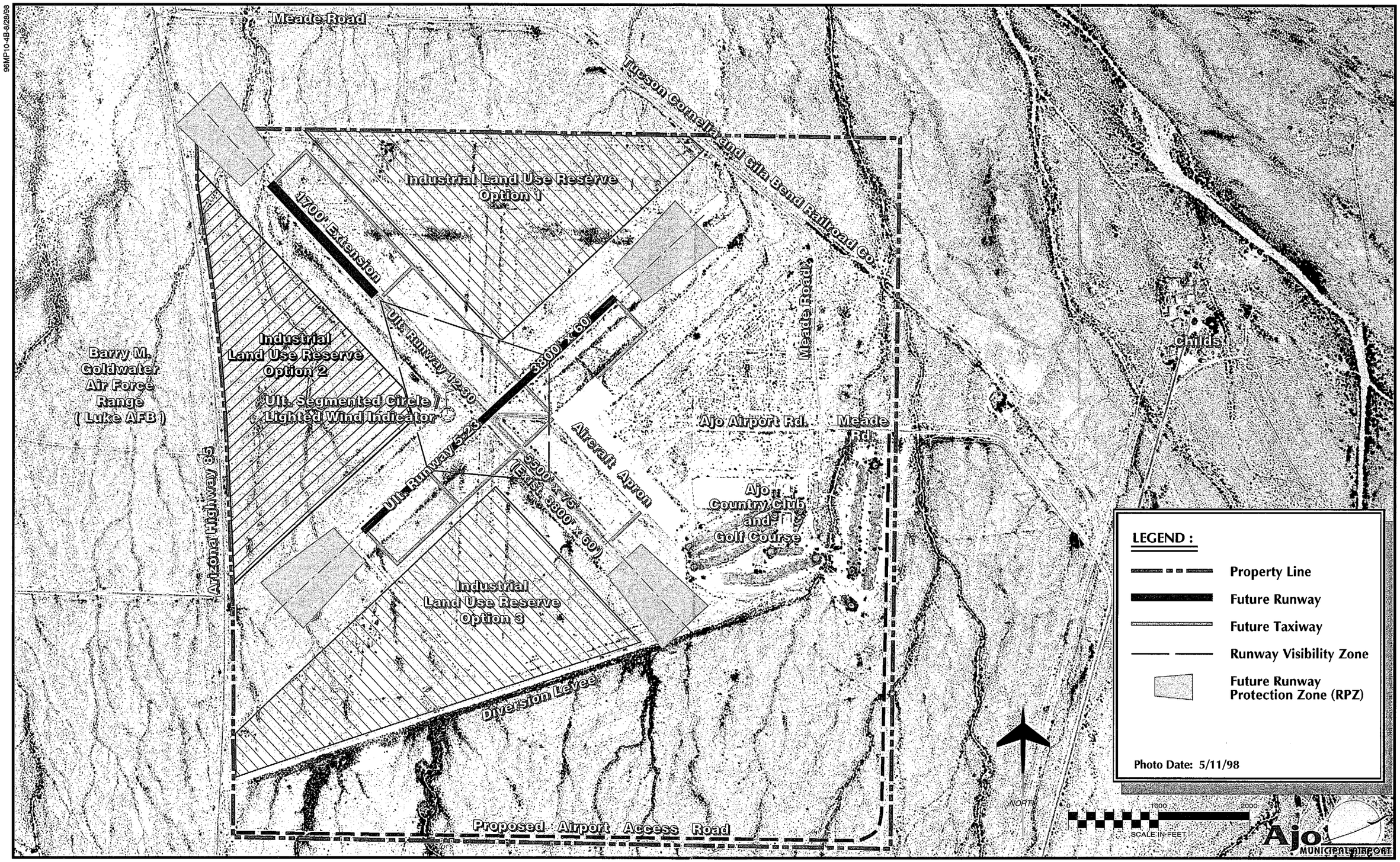

Exhibit 4B
AIRSIDE ALTERNATIVE 2

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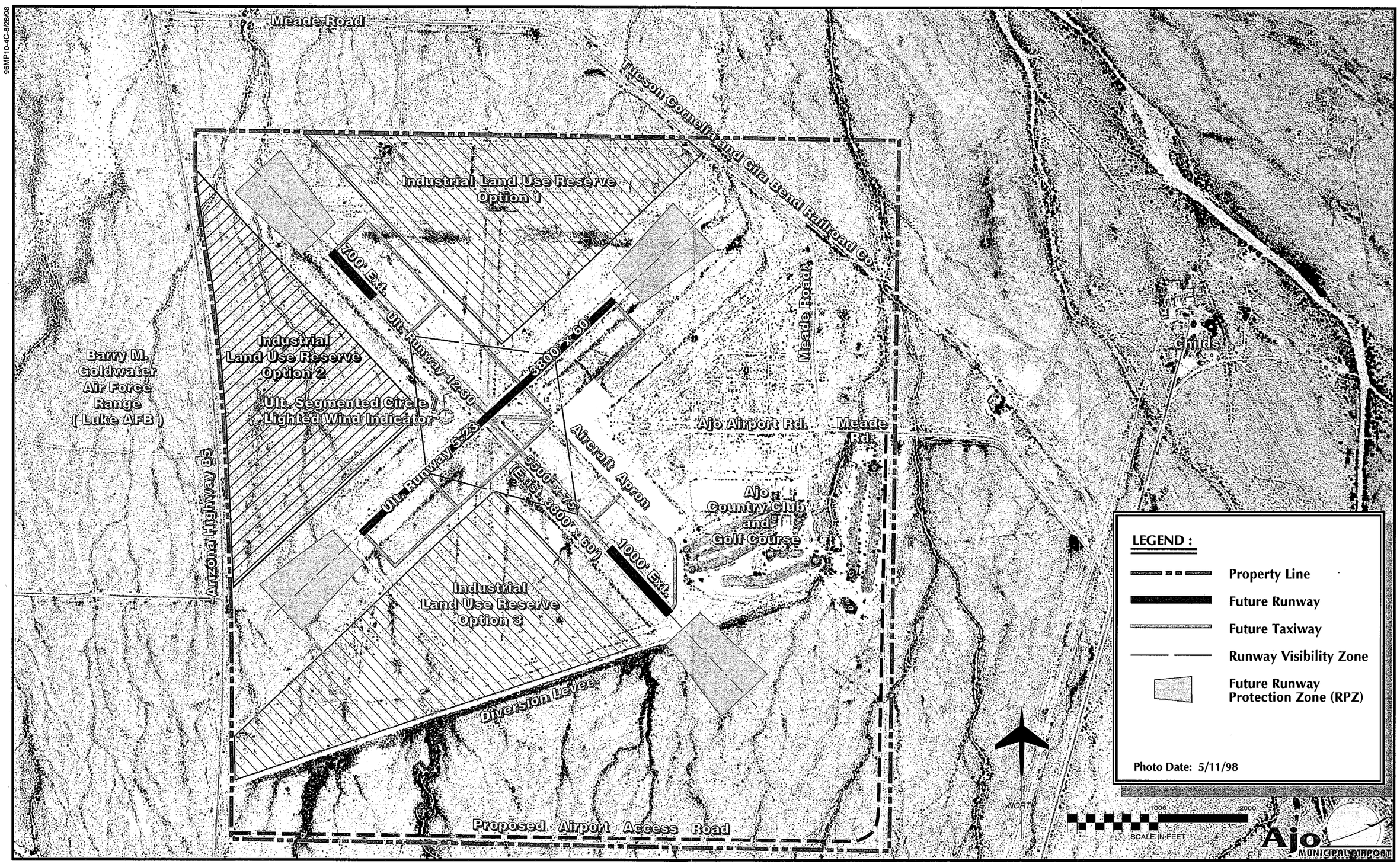

Exhibit 4C
AIRSIDE ALTERNATIVE 3

of the ultimate Runway 30 RPZ approach surface.

Additional airside improvements, which apply to all three airside alternatives, include the establishment of a GPS approach to Runway 30, the upgrading of existing or installation of new visual glide slope indicators (PAPI-2) to both the existing and new runways, low intensity runway lighting (LIRL), and threshold lighting for Runway 5-23, taxiway edge lighting, runway/taxiway pavement markings, and a lighted wind indicator/segmented circle.

Also shown on each airside alternative, for ease of illustration and clarity, are two items which are, in reality, landside considerations. The first of these is a proposed airport access road located south of the diversion levee. Closing the existing 1. 3 mile long service road that parallels the levee south of Runway 30 and constructing this new road would allow the Airport greater control over airport property access which would lessen or eliminate current problems affecting airfield safety and security. The second item, again presented on each airside alternative, depicts three options concerning airport property to be reserved for future industrial land use. Over the years, several business entities have expressed interest in establishing manufacturing facilities at Ajo Municipal Airport.

LANDSIDE ALTERNATIVES

The primary landside facilities to be accommodated at the Airport include airport-related businesses, public terminal facilities, aircraft storage hangars, and aircraft parking aprons. The interrelationship of these functions is important in defining a long range landside layout for the Airport. To a certain extent, landside uses need to be grouped with similar uses or uses that are compatible. Other functions should be separated, or at least have well defined boundaries for reasons of safety, security, and efficient operation. Finally, each landside use must be planned in conjunction with the airfield, as well as ground access that is suitable to function. Runway frontage should be reserved for those uses with a high level of airfield interface, or need for exposure. Other uses with lower levels of aircraft movement, or little need for runway exposure can be planned in more isolated locations. The following briefly describes landside requirements.

Fixed Base Operator (FBO): This essentially relates to providing areas for the development of facilities associated with aviation businesses that require airfield access. This includes businesses involved with (but not limited to) aircraft rental and flight training, aircraft charters, aircraft maintenance, line service, and aircraft fueling. Businesses such as these are characterized by high levels of activity with a need for apron space for the storage and circulation of aircraft. In addition, the facilities commonly associated with businesses such as these include large, conventional type hangars which hold several aircraft plus attached office and business space. Utility services are needed for these type of facilities as well as automobile parking areas. Presently, there is not an on-airport facility to accommodate such activities: however, the facility requirements analysis conducted in Chapter Three recommended the siting of such a facility should the need arise. The projections for long term facility requirements were determined to be 11,500 square feet of conventional hangar space.

Enclosed T-Hangars and T-Shade Hangars: The facility requirements analysis indicated that 10 T-Hangar units or T-Shade units may be needed to satisfy projected long term demand. Presently, there are 2 4-bay T-Hangar units at the Airport, though all are leased, not all are used for aircraft storage. As noted in Chapter One, an aviation-related business occupies three of the hangars and County records indicate four people on the T-Hangar waiting list.

Terminal Facilities: General aviation terminal facilities have several functions including: providing passenger waiting areas, a pilot's lounge and flight planning area, restrooms, food and beverage concessions, administrative and management offices, storage, and various other needs. Currently, there is no dedicated terminal facility at Ajo Municipal Airport. The lone FBO facility at the Airport provides none of the above functions. The facility requirements analysis indicated a current need of 150 square feet and a long term requirement of 300 square feet of terminal facility space. As discussed in Chapter One, basic necessities such as restrooms and potable water are not presently available at the Airport. Additional utilities as well as automobile parking areas are also required for this type of facility.

Parking and Access: Currently, airport users park on the adjacent apron area east and south of the two existing T-Hangar units, with apron access available to based aircraft owners. While this is adequate for present use, a designated paved and marked parking area will be required to meet future demands. A designated parking area would also help to eliminate safety and security hazards currently created by vehicles crossing aircraft aprons for T-Hangar and tie-down access.

Further safety and security issues could be addressed by limiting Airport access to Ajo Airport Road. This could be accomplished by closing off public access to the dirt service road that currently transects Airport property from State Highway (SH) 85 on the west to the western edge of Ajo Country Club. Closing of this road and limiting airport access could be achieved by gating the SH 85 entrance/exit as well as gating and fencing of the road where it enters/exits both the Airport and Country Club property. As mentioned in Chapter One, local residents currently use this road as a shortcut to and from SH 85. The proposed airport access road, shown on the airside alternative exhibits, could replace this existing road and would continue to provide local access to SH 85. In addition, airport perimeter fencing should be installed or upgraded/repaired where needed to eliminate all unauthorized airport access.

It should be further noted that all four landside alternatives presented in this section require the paving of all or part of the existing Ajo Airport Road as well as construction of secondary access roads to service both the recreation and corporate parcel development areas. These roads are illustrated on each of the respective landside alternatives.

Hangar Lease Parcels: This involves providing parcels of land for businesses or individuals who wish to construct their own aircraft storage hangar. The ideal location for these facilities is off the immediate flight line but readily accessible. Utilities such as water, sewer, electricity as well as auto parking should be considered for these areas.

Apron: As discussed in previous chapters, currently there are six (6) tie-downs available for use at Ajo Municipal Airport. Long term

facility requirements indicate the need for eight tie-downs with a related 5,600 square feet of apron area. Again, as noted in Chapter Three, according to ADOT records there are more than 85,000 square yards of existing apron at the airport, of which, only 23,880 square yards is considered usable. The alternatives analysis will address only the location or relocation of the aircraft tie-down areas. However, it is recommended that the portion or portions of apron that can be identified as non-usable or unrepairable be scheduled for future demolition and removal.

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Fuel Storage: As current airport usage does not warrant the construction of a fuel storage facility at Ajo Municipal Airport, the alternatives analysis will only address the reservation of a site for a future fuel storage facility location. However, any such location should be made convenient and readily accessible to both based and transient aircraft

Recreational Area: Both the Arizona Department of Transportation - Aeronautics Division and the Arizona Pilot's Association have expressed interest in the development of "fly-in" campground facilities at Ajo Municipal Airport. This recreational facility would consist of an aircraft tie-down apron, campsites, restrooms and showers as well as an auto parking area. Like the pilot project "fly-in" recreational area completed in June 1997 at Payson Airport in Gila County, this facility could be constructed with grant assistance from ADOT, if approved by the State Transportation Board. The alternative analysis will examine various location options of such a facility within each of the four presented airside alternatives.

Other Landside Considerations: The facility requirements chapter indicated that siting for a future aircraft wash rack facility should be considered in any future landside development. As with the fuel facility and recreation area, recommendations as to the location of a future aircraft wash rack are incorporated in all four landside alternatives.

As previously noted, though they are actually landside considerations, the proposed airport access road and industrial land use reserve options are illustrated on the three airside alternatives presented earlier in this chapter. Additional items that must be considered but are not represented graphically on the landside alternative exhibits include a sanitary septic system compatible with future development, potable water and required fire suppression or other related fire safety equipment as it relates to new or existing airport structures.

Exhibit 4D illustrates Landside Alternative A. This alternative considers development southeast of the existing T-Hangar area and adjacent to the existing aircraft parking apron. An area is reserved along this apron for a future terminal facility, two FBO or conventional hangar sites as well as an auto parking area. Further to the southeast is an area designated for a future fuel storage facility. Directly in front of the proposed terminal facility is the aircraft tie-down area, where additional tie-downs could be added and the area could be divided into local and itinerant sections. To meet long term needs, an additional 4-bay T-Hangar would be developed west of the northernmost existing T-Hangar, while the area west of the southern T-Hangar unit could be reserved for any additional future expansion. Meanwhile, the far northwest edge of the existing apron would be allocated for future corporate parcel development. Located between the corporate parcels and the T-Hangar area would be an

aircraft wash rack facility. The area northeast of the corporate parcels would be earmarked for recreational development.

Advantages: This alternative employs the existing aircraft tie-down area and proposes development along the portion of the apron currently utilized the most. Also, the existing Ajo Airport Road would be paved along its current alignment.

Disadvantages: None.

Landside Alternative B, shown on **Exhibit 4E**, proposes development on the northwest edge of the existing aircraft apron. Like the previous alternative, Alternative B depicts a future terminal facility, two FBO or conventional hangar sites and an auto parking area, however, this development is located northeast of the existing T-Hangar area. North of this area would be the fuel storage facility. To the south between the T-Hangar area and the southern FBO/Conventional hangar would be the aircraft wash rack area. Beyond the fuel storage facility to the northeast would be the corporate parcel development area. The existing apron in this area would be extended approximately 250 feet to the northeast to service any future corporate parcel development. A new local/itinerant tie-down area is proposed and again, would be located directly in front of the future terminal facility. As with Alternative A, an additional 4-bay T-Hangar would be constructed west of the northernmost existing T-Hangar, and the area west of the southern T-Hangar unit would be held for additional future expansion. The recreational development area with its related tie-down area would be located southeast of the T-Hangar area.

Advantages: This alternative conveniently places the recreation area adjacent to the Ajo Country Club and leaves considerable room and flexibility for future development parallel to the proposed Runway 5-23.

Disadvantages: Requires relocation of aircraft tie-down area to suspect apron area which may require extensive and costly apron rehabilitation. In addition, apron expansion to service corporate parcels would require approximately 9,500 square yards of new apron surface. This alternative would require realignment of the existing Ajo Airport Road.

Landside Alternative C, depicted on **Exhibit 4F**, is somewhat similar to Alternative A in that it proposes development southeast of the existing T-Hangar area that likewise borders the existing aircraft parking apron. Again, an area is reserved along this apron for a future terminal facility, two FBO or conventional hangar sites as well as an auto parking area. Land southeast of this area, however, would be allocated for future corporate parcel development. The areas reserved for the fuel storage facility and wash rack area would be along the northwest edge of the apron. Again, like the first alternative, the existing tie-down area could be utilized by adding more tie-downs and dividing the area into local and itinerant sections. An additional 4-bay T-Hangar would be added northwest of the existing hangars plus a related auto parking area would be developed northwest of the proposed terminal-FBO area. The area set aside for recreational development would be northeast of the proposed fuel storage and wash rack area.

Advantages: As with Alternative A, this alternative employs the existing aircraft tie-down area, however, it spreads proposed development along the entire length of the

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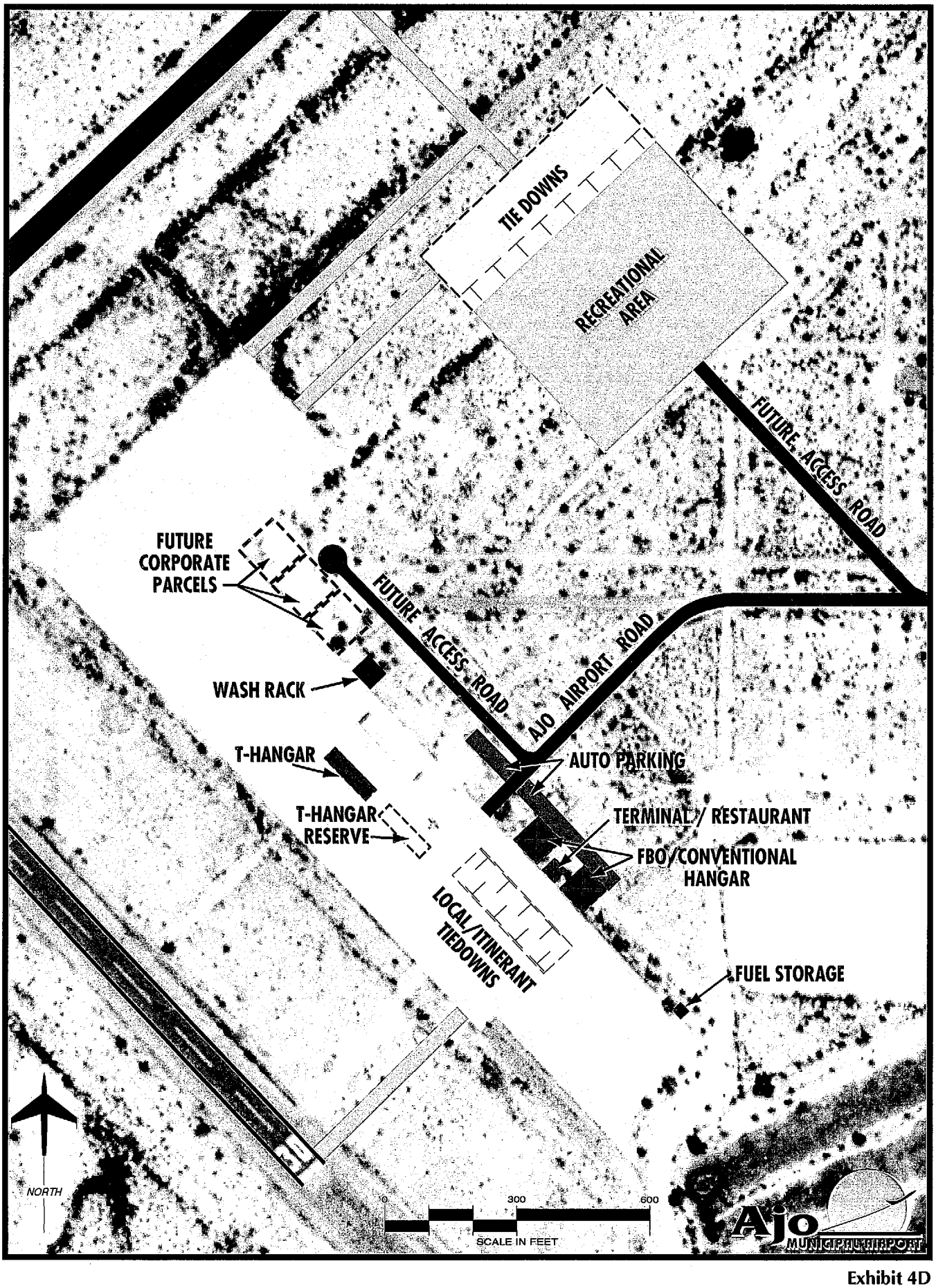

Exhibit 4D
LANDSIDE ALTERNATIVE A

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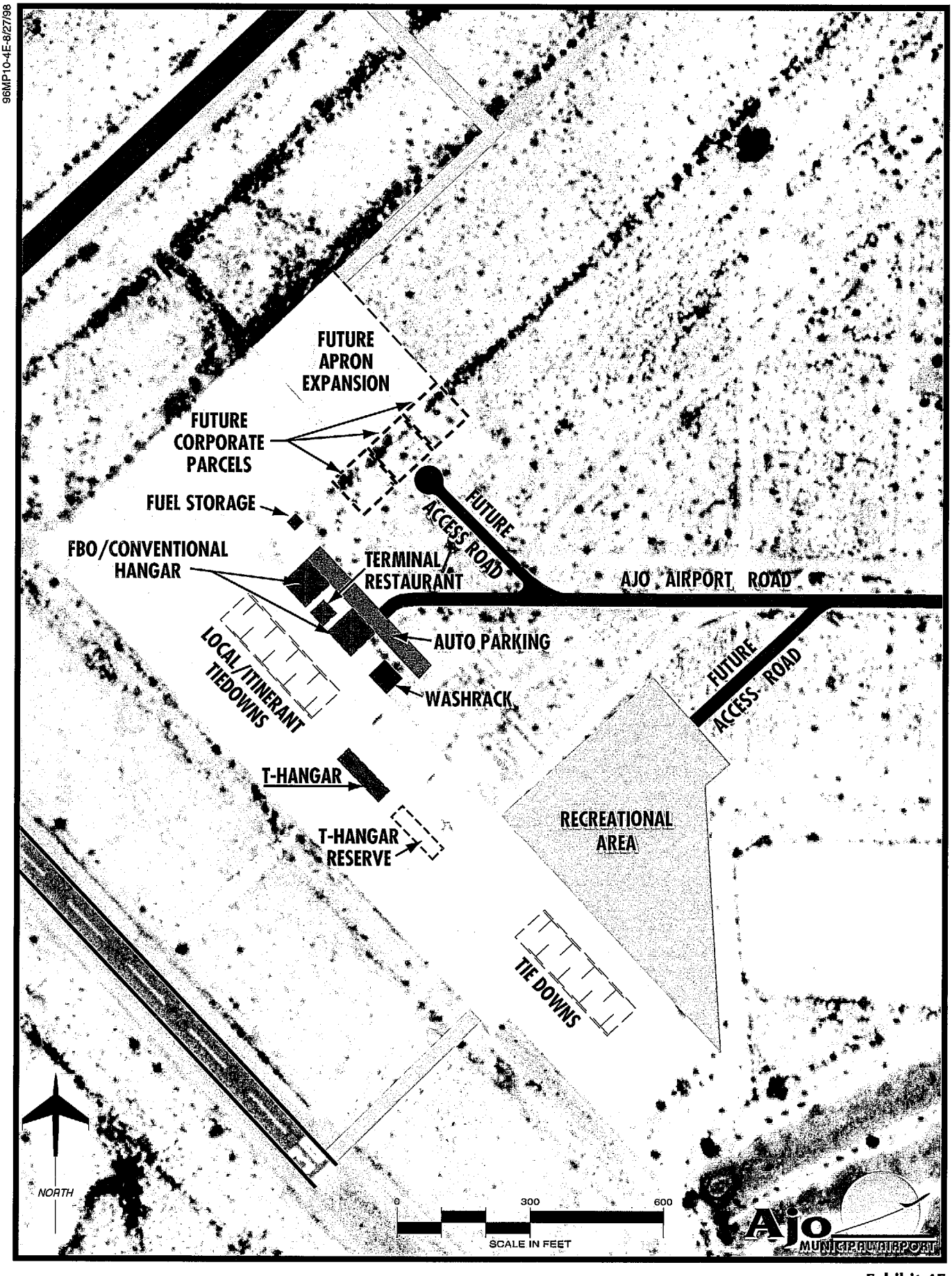

Exhibit 4E
LANDSIDE ALTERNATIVE B

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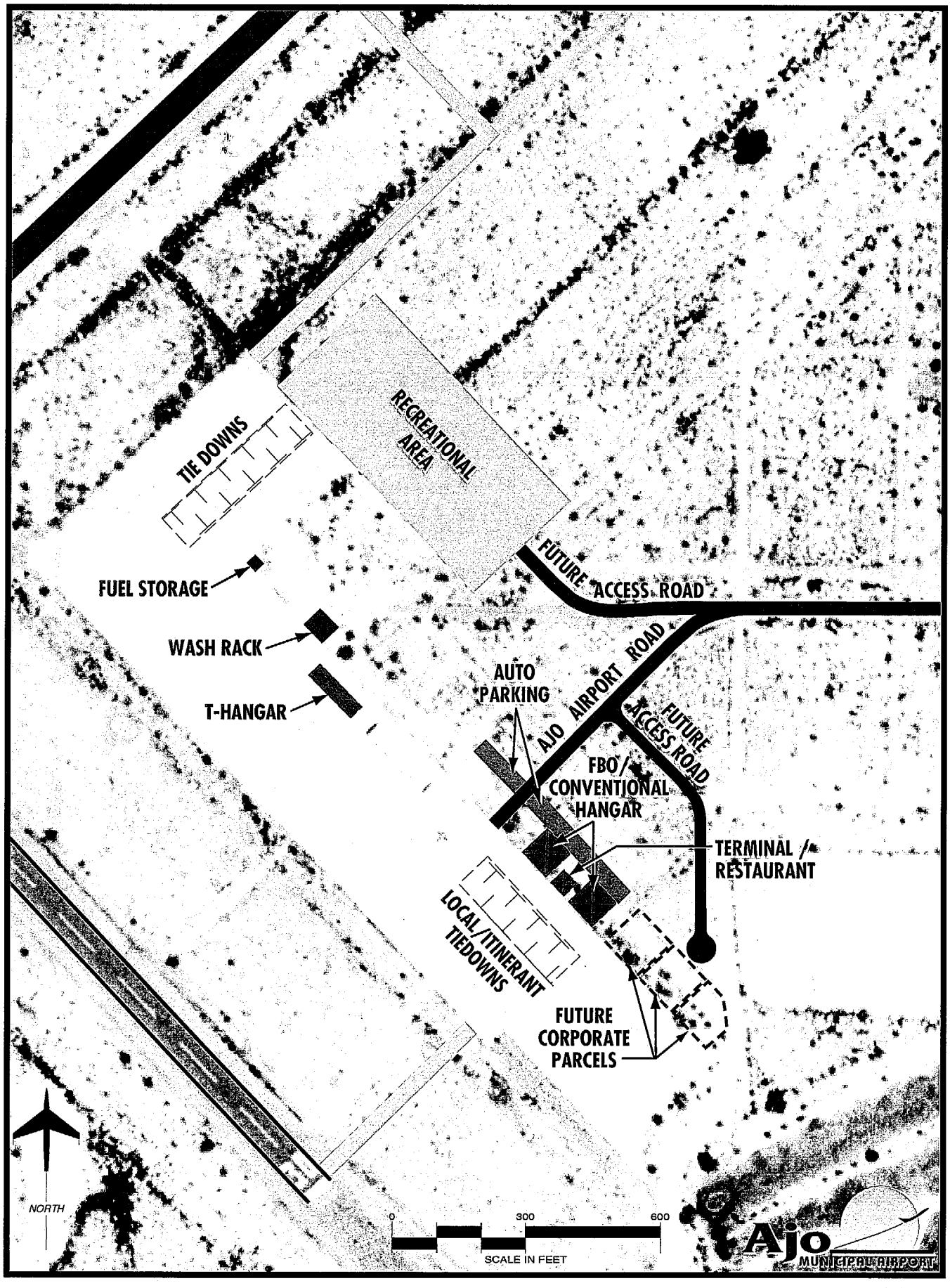

Exhibit 4F
LANDSIDE ALTERNATIVE C

current apron. Again, like the first alternative, the existing Ajo Airport Road would be paved along its current alignment.

Disadvantages: Locates fuel storage and aircraft wash rack facilities further from the terminal, aircraft parking and FBO/conventional hangar facilities than the two previous alternatives.

Exhibit 4G presents Landside Alternative D and differs significantly from the previous three alternatives. This alternative proposes development of an entirely new landside facility area to be located southwest of the end of Runway 12. However, this new development area would provide the Airport with convenient frontage to State Highway (SH) 85. The proposed ramp or apron area would parallel Runway 12-30 and be 315 feet in width and vary in length depending on the ultimate extension length selected for Runway 12. The terminal facility, FBO/conventional hangars, and related auto parking area would be located adjacent to the new apron at mid-ramp. Southeast of this area is the aircraft wash rack, beyond which two 4-bay T-Hangar units would be constructed plus space would be reserved for future hangar expansion. Northwest of the terminal facility area would be the corporate parcel development area with its related auto parking. Located between the terminal facilities and the corporate parcels would be the fuel storage facility. The area reserved for recreation development would be located southwest of the T-Hangar units and near the Runway 23 end of the proposed crosswind Runway 5-23. Additionally, the parallel taxiway systems proposed for Runways 12-30 and 5-23 would now be constructed on the opposite sides of the runways rather than how they are illustrated on the previously discussed three airside alternatives. Airport access to SH 85 would be by means of the 2-lane loop road which is illustrated on this exhibit. The area within the loop between the highway and the airport facilities could be reserved for future commercial/industrial development.

Advantages: As noted, this alternative would provide accessible highway frontage thus making Ajo Municipal Airport more attractive to potential industrial and commercial related tenants, and boosting the Airport's economic impact potential to the community. In addition, airport access and security could be easier controlled by this development layout.

Disadvantages: Considerable costs would be incurred to construct this proposed alternative and its related infrastructure. Several desert washes would be affected by this development and like the extension to Runway 12 shown on Airside Alternative 2, may require a Section 404 (Clean Water Act) permit prior to any construction.

SUMMARY

A preliminary master plan concept will be developed after the alternatives are reviewed by the Planning Advisory Committee and Pima County. Once the preliminary master plan concept has been identified, cost estimates will be prepared for the individual projects, a development schedule will be outlined, and potential funding sources for recommended projects will be identified (including those projects that are eligible for federal or state funding assistance). The remaining chapters of the master plan will be used to refine a final concept through the development of detailed layouts and a phased development program. An environmental review of the proposed development will also be conducted to identify any potential environmental concerns related to future airport development.

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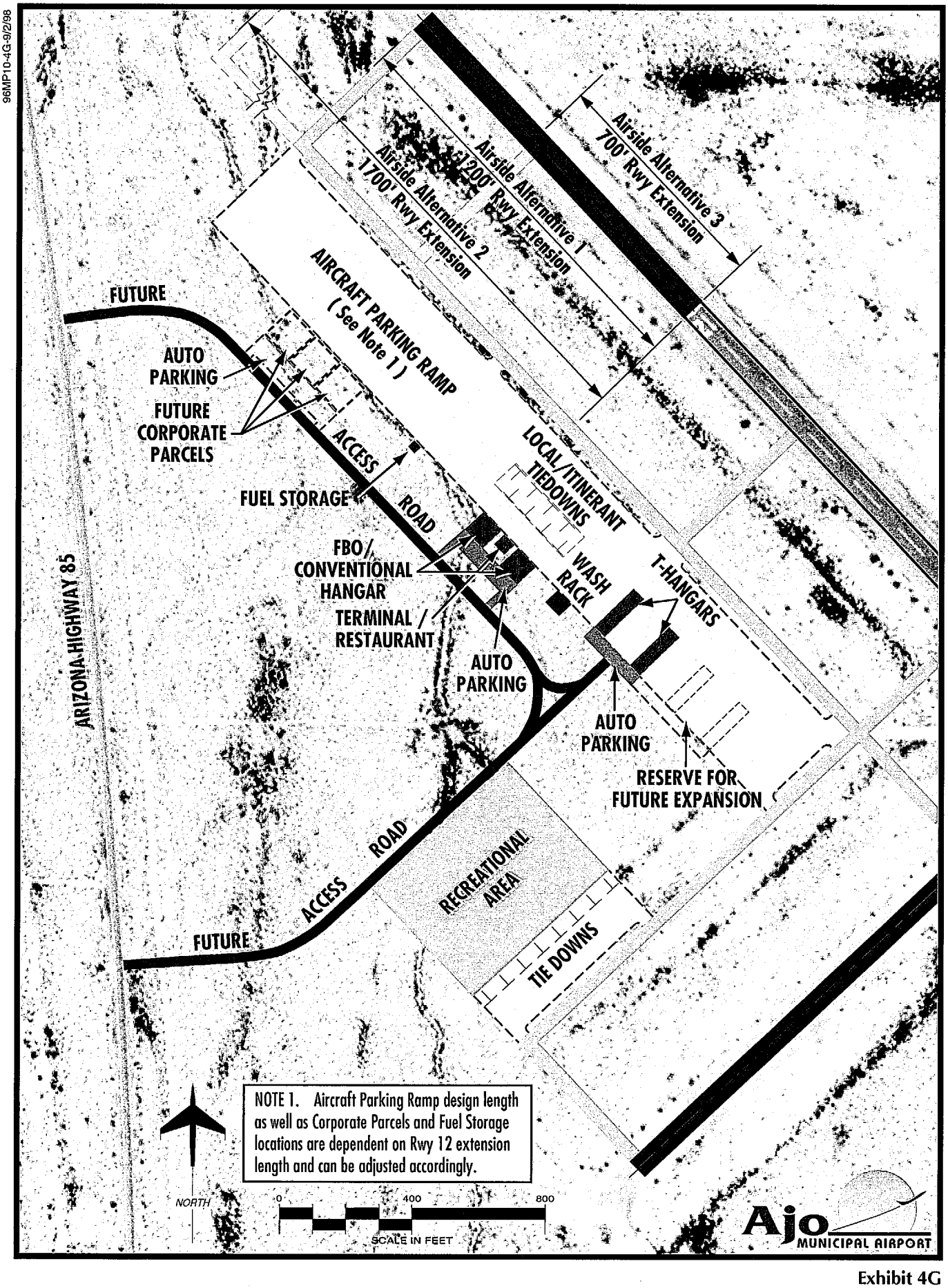

Exhibit 4G
LANDSIDE ALTERNATIVE D